Equipment Basics Course

“With everything else dropping out of the competitive equation, knowledge has become the only source of long-run, sustainable, competitive advantage”
-Lester Thurow

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Vacuum Products

Vacuums are the most versatile product of all cleaning equipment. Every location you encounter will need vacuum products. The style of vacuum required depends on the application. Vacuuming should be done before any carpet cleaning is attempted.

Fan or Impeller Vacuums

Fan or impeller vacuums are the most common style of vacuum. Impeller vacuums use a fan attached to a high speed motor that creates air flow. Similar to a propeller, these fans spin at high speed and create suction. Impeller vacuums are not "true" vacuums, since no sealed containment bin is present. These units pick up the soil and force it into a containment bin. In most cases, the containment bin is a paper bag housed inside of a cloth shake-out bag. In some instances, the collection bin is a dust cup collector that does not require a bag. This system is commonly referred to as a "dirty air system." The dirt and debris passing directly through the impeller will damage it over a period of time. Impeller vacuums generally employ the use of a beater bar/brush combination. Over time, the beater bar can damage carpet by breaking off fibers. The filtration level on this style of vacuum is usually low because of the soil being forced through the collection bag. These vacuums make up a large percentage of all vacuums sold in the commercial market. The prices range from $130-$250 depending upon the make and model. These vacuums generally have a short life expectancy and require repeated maintenance. Common brands include Eureka Sanitaire, Oreck, Hoover, Panasonic and Royal. Windsor does not manufacture or promote this style of vacuum.

Single Motor Uprights

Single motor uprights use an electric motor that creates a vacuum and propels the brush roller. While only employing a single motor like an impeller style vacuum, these vacuums are considered "clean air systems" based on the soil never traveling through the vacuum motor. The air movement created is pulled through the containment bin or bag housing where the soil is collected in a disposable bag. The air then exits the compartment through a filter system. There are many differentiation points on these units--some have automatic adjustments, lights that identify a full bag or clogs and many other features you will not find on the fan-style vacuum. Many of these units provide indoor air quality (IAQ) features with 99.6% filtration at .3-microns. These units will take a little more sales skill, but studies have shown that over 50% of the fan-style purchasers would buy this type unit over the existing fan model given the opportunity and the proper value explanation. The pricing varies significantly with features and benefits and range

from $225-$500. Common brands include Windsor, Advance, Clarke, NSS, Tennant, Hoover, and Panasonic. Windsor products include:

Windsor Single Motor Upright Products		
Product	*Stock #*	*Advantages*
Sensor XP 12 Sensor XP 15 Sensor XP 18	1.012-024.0 1.012-027.0 1.012-030.0	• Automatic adjustment of the vacuum brush for any surface • Wand for detail work • Sensor automatically shuts down when the bag is full • Sensor automatically shuts down when brush motor is clogged • 99.6% efficient at .3 microns
Sensor S 12 Sensor S 15	1.012-021.0 1.012-022.0	• Wand for detail work • Sensor automatically shuts down when the bag is full • Sensor automatically shuts down when brush motor is clogged • 99.6% efficient at .3 microns

Dual Motor Upright Vacuums

Considered the “work horse” model because of its durability, dual motor vacuums are for high usage applications. Dual motor vacuums are designed to run significant hours in a day and have high duty cycles. These units use an independent vacuum motor and a brush motor to keep performance high and failures low. This makes them more of an investment when compared to single motor vacuums. These vacuums generally have a long life expectancy due to their simple reparability. Repairs can be more costly, but occur less frequently that lower priced vacuums. Like the single motor uprights, dual motor uprights are “clean air systems,” so soil never travels through the vacuum motor. Dual motor uprights are true vacuums. These vacuums employ a disposable paper bag and occasionally have a cloth bag option housed in the containment housing. Dual motor uprights are excellent choices in facilities that have heavy traffic and require years of service from their vacuums. Applications such as education, healthcare, large public facilities and hospitality are excellent fits. Anywhere you can sell value and longevity; this will be the vacuum of choice. This product requires more sales skill than any of the others since you are selling quality, productivity and longevity over price. The price point runs anywhere from $450-$900 depending upon manufacture and model. Common brands include Windsor, Advance, Clarke, NSS, and Tennant. Windsor products include:

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Windsor Dual Motor Upright Products		
Product	*Stock #*	*Advantages*
Versamatic 14 Versamatic 18	1.012-034.0 1.012-036.0	• The oldest dual motor vacuum still available • Removable brush strip allows replacement of the strip rather than the entire brush roll
Versamatic Plus 14 Versamatic Plus 18	1.012-038.0 1.012-040.0	• Removable brush strip allows replacement of the strip rather than the entire brush roll • As on all the Windsor vacuums, the belt that drives the brush is completely enclosed and protected • Utilizes the same bags as the Sensor, which allows the customer to only stock one bag
Axcess 12 Axcess 15	1.012-061.0 1.012-062.0	• Axcess steers right and left with a turn of the wrist • 20% faster than a conventional vacuum in congested areas • Better for people with Carpal Tunnel Syndrome • Burnisher head available to turn Axcess into small area active filtration burnisher

Wide Area Vacuums

Any vacuum that employs a vacuum shoe of 20” and higher is considered a wide-area vacuum. Most models range from 24”-30”. Wide area vacuums operate on the same “clean air system” as dual motor uprights, only in a larger capacity. In most cases, these units will employ dual vacuum motors to compensate for the larger opening. These units are designed to be used in large open areas of carpet or long hallways. Wide area vacuums can offer high filtration and increased productivity over uprights. Most wide area vacuums utilize a single brush-roller, some (including the NuWave) employ dual counter-rotating brush technology. Windsor products include:

Windsor Wide Area Vacuum Products		
Product	*Stock #*	*Advantages*
Wave	1.012-505.0	• 75’ cord • 6 position height adjustment • On-board tools & wand
NuWave	1.012-533.0	• Dual counter rotating brushes for front & back pass in single stroke • Floating brush deck requires no operator adjustments • Brushes are removable with no tools for easy cleaning

Sweeper/Vacs

Over the past five years, sweeper/vacs have seen a steady increase in replacing cord electric wide area vacuums. This is based primarily on the tremendous increase in productivity with a sweeper/vac that is obtained by eliminating the cord and by utilizing battery power. Sweeper/vacs operate similar to impeller vacuums, except

the soil and debris do not travel through the fan. The impeller in a sweeper/vac only creates a small amount of airflow that assists in collecting lighter dust and soil. The large main broom "sweeps" the soil and debris into a hopper. These machines can be used in outdoor or indoor applications, but never both with the same machine. These work well in environments where larger objects are being picked up. A movie theater would be a location that you might sell a sweeper. Areas that have hard floors and carpet floors that want a dual-purpose unit might be another. Sweeper/Vacs lack high quality filtration and are not true vacuums. The prices and styles vary greatly and range from $1000 for low-end sweepers to $6000 for very large ones. Brands include, Windsor, IPC Eagle, Tennant and Advance. Windsor products include:

Windsor Walk Behind Sweeper/Vacs		
Product	*Stock #*	*Advantages*
Radius 280 Deluxe	1.517-206.0	• Battery powered • Vacuum fan provides active dust control • Easy main and side broom adjustments • Side broom fold up for cleaning in dusty environments
Radius 300	9.840-664.0	• 1.4 ft3 (40 l) hopper capacity • Active dust control system

Canister Vacuums

Canister vacuums employ a wand and hose connected to a "canister" that sets on the ground. In some models the vacuum head contains an electrically powered brush roller. In other models no brush roller or power is present. Canister vacuums have become a popular replacement for back pack style vacuums since they have similar components. A canister vacuum can trail along with the user but do not have to be carried on the back. Many canister vacuums are quieter than their upright counterparts and are great to use in noise sensitive areas such as call centers and lobbies. Canister vacuums have better filtration than fan or impeller vacuums and therefore are preferable replacements to that style. Canister vacuums are considered "clean air systems" and are "true vacuums". Pricing varies significantly from low 100's up to $1000.

Common brands include Windsor, North American, and Advance. Windsor products include:

Windsor Canister Vacuum Products		
Product	*Stock #*	*Advantages*
Trekvac 2	1.527-104.0	• Washable nylon main filter • Quick connect hose system • Onboard floor tool storage
Trekvac 3	1.355-107.0	• Washable nylon main filter • Quick connect hose system • Onboard floor tool storage • 61 dB allows for cleaning in sound sensitive areas • 99% efficient at .3 microns

Back Pack Vacuums

Back pack vacuums have made a strong impact on the market in applications where quick vacuuming is a necessity. Back pack vacuums are essentially canister vacuums that the operator wears. They offer similar features and options as canister vacuums. This is the only style of cleaning equipment an operator wears. Back packs utilize a single motor but the performance is not as high as a standard vacuum because it lacks brush agitation. Building service contractors represent the largest segment of end-users for this product. Prices range from $350-$700. Common brands include Windsor, ProTeam, Clarke, Advance, Tennant, and NSS. Windsor products include:

Windsor Back Pack Vacuum Products		
Product	*Stock #*	*Advantages*
Vac Pac 6	1.014-007.0	• Spacer between belt and motor to reduce heat on lower back • Wide variety of tools
Vac Pac 10	1.014-005.0	• Spacer between belt and motor to reduce heat on lower back • Wide variety of tools

Wet/Dry Vacuums

Wet/Dry vacuums are a very commonly used piece of equipment used primarily for wet pick up. It can be used for dry applications but a filter bag must be placed in the tank of the machine to prevent dust from being pulled into the vacuum motor. Wet/dry vacuums have increasingly become commodity products over the past 10 years. With a large influx of consumer products into the market, the profitability of these units has dropped dramatically in the commercial segment. Virtually every facility has the need for a wet/dry vacuum. A bypass motor of 1.5 to 3 horsepower is the standard. The machine is traditionally used with a 2-bend wand and a squeegee floor tool. Front mount squeegee units are very effective for fast recovery of liquid. Inexpensive units designed for consumer use do not usually have a commercial bypass vacuum as part of the machine. They are rated to run 30 minutes a week versus 8 hours per day on a commercial wet/dry. Windsor products include:

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Windsor Wet/Dry Vacuums		
Product	*Stock #*	*Advantages*
Titan 8 Titan 16 Titan 20	1.013-006.0 1.013-008.0 1.013-010.0	• 87” of waterlift • Made with strong blow-molded plastic • Comes with 8 piece tool kit
Recover 7 Recover 12 Recover 17 Recover 12 w/FMS	1.428-513.0 1.428-609.0 1.667-142.0 9.840-844.0	• Onboard cleaning tools storage • 94.3” of waterlift on Recover 17 • 80” of waterlift on Recover 7 & 12

Chariot iVac ATV 24 & 34

Recently, a new category was created by Windsor with the introduction of the Chariot Stand-Up riding vacuum cleaner. The unique feature of the iVac ATV is its’ ability to vacuum all types of surfaces, hard or soft, effectively and thoroughly. The Chariot ATV utilizes a specially designed vacuumized brush deck that employs dual counter-rotating brushes and a vacuum tray to allow the ATV to vacuum virtually any surface. The 24” machine also comes standard with off-board cleaning feature that allows the operator to clean remote locations up to 20 feet from the machine. Each Chariot ATV is equipped with HEPA filtration as a standard feature. With production rates of 23,000-34,000 sq ft per hour respectively, the Chariot iVacs can outperform wide area vacuums, uprights and back packs.

Windsor Stand-On Vacuums		
Product	*Stock #*	*Advantages*
Chariot iVac 24 ATV HEPA Vacuum	Varies	• Multi-surface cleaning HEPA stand-on vacuum designed for carpet, tile, wood, concrete, stone, rubber, VCT • 24" cleaning path , 8" standard side broom • HEPA standard, 68 dBA • On-board tool storage • Dual counter-rotating brushes with easy no-tool removal
Chariot iVac 34 ATV HEPA Vacuum	Varies	• The Chariot iVac ATV is a high performance, multi-surface cleaning HEPA stand-on vacuum designed for carpet, tile, wood, concrete, stone, rubber, VCT • 34" cleaning path • HEPA filtration standard, 68 dBA • Dual counter-rotating brushes with easy no-tool removal
Chariot iVac 34” Deluxe	Varies	• 28,600 square feet per hour; over 3 times as productive as a standard wide area vacuum • 34” wide vacuum path • Dual counter rotating brushes

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Carpet Extractors

A carpet extractor utilizes hot or cold water, dispensed through spray jets directly onto the carpet. In most machines the carpet is agitated by a brush, and recovered by a vacuum system and deposited into a recovery tank. All this action is completed in a very short time resulting in a washing action to the carpet. Extraction is the most thorough way to preserve carpet life and appearance; however, it is also the most labor intensive method for carpet cleaning.

Spotters

A spotter extractor is designed to be lightweight and easily transported to the job site to remove spots from carpet before the spill turns into a stain. Spotters are designed to encourage cleaners to attend to spots and spills quickly. These units have relatively limited solution/recovery capacity (2 gallon) with lower than average psi (around 50 psi or lower.) The unit consists of a solution tank, recovery tank, vacuum motor and pump. Windsor products include:

Windsor Spotter Extractors		
Product	*Stock #*	*Advantages*
Presto 3 Presto 3 Deluxe	9.840-068.0 9.840-069.0	• 2 gallon solution & recovery tanks • Presto Deluxe comes with the standard hand tool and the Double Dry hand tools for upholstery, drapes, and cubicle partitions
Priza	1.100-122.0	• Upright wand and hand tool standard • 14 psi pump delivers spotter to the surface of the carpet pile and reduces wicking • Recovery tank removes for easy cleaning

Portable (Box) Extractors

These machines depend on high psi (pounds per square inch) and superior vacuum performance to clean carpet. They can also be fitted with heating units to improve cleaning capability. These are designed to be an adequate substitution for cleaners who normally utilize truck-mount extractors. Solution/recovery capacity is much larger than most extractors, yet are quite easily transported from site to site. This makes the unit ideal for the contract cleaner. Portables are used in conjunction with a wand (drag tool). This tool does not have brush agitation. The high psi and heat do the job. Windsor products include:

Windsor Portable (Box) Extractors		
Product	*Stock #*	*Advantages*
Dominator 13	1.006-669.0	• Productive cleaning power and versatility • 13 gallon solution capacity, 11 gallon recovery tank • Adjustable 0-500 psi spray pressure provides versatility to clean delicate upholstery and the power to clean the dirtiest carpet • Available with lightweight, ergonomic AquaFoil

		Wand Kit • Available with or without heat
Dominator 17	1.006-670.0	• Productive cleaning power and versatility in a portable carpet extractor • 17 gallon solution capacity 14 gallon recovery tank • Adjustable 0-500 psi spray pressure provides versatility to clean delicate upholstery and the power to clean the dirtiest carpet • Large compact wheels and compact size make Dominator easy to move around the facility or transport from job site to job site • Models available with 1850W internal water heater for additional cleaning power • Available with lightweight, ergonomic AquaFoil Wand Kit

Self-Contained

Self-contained extractors apply solution directly to the carpeted surface, agitate with a brush and recover dirty solution in a single pass. Self-contained extractors have a single cylindrical brush or dual brushes incorporated into the machine to increase cleaning power. Water lift and psi are not as high as portables as the brush agitation plays a larger role in the cleaning effectiveness. Self-contained extractors can be either standard “pull backward” machines or “walk-behind” machines. Some machines may have the ability to be pushed or pulled. Brush width and solution/recovery capacity vary in sizes to accommodate the scope of the application. Windsor products include:

Windsor Self Contained Extractors		
Product	*Stock #*	*Advantages*
Mini Pro	1.008-039.0	• Easy fold handle for storage and transportation • Mesh screen protects fresh water tank from debris • Simple operation
Cadet 7	1.008-022.0	• Roto-molded handle for durability • Brush removes with not tools for easy maintenance • Floating vacuum shoe
Admiral 8	1.008-017.0	• Handle adjusts to accommodate users of different heights • Brush removes with not tools for easy maintenance • Floating vacuum shoe
Clipper 12	1.008-025.0	• Handle flips for pull-back and walk behind cleaning • Brush removes with not tools for easy maintenance • Floating vacuum shoe
Clipper DUO	1.008-048.0	• Handle flips for pull-back and walk behind cleaning • Dual counter rotating brushes provide superior cleaning • Self adjusting brush deck • On-board upholstery & spotting tool

Walk-Behind Extractors

Larger walk-behind extractors operate exactly like their smaller self-contained versions. Walk-behind extractors are designed for large square footage applications, where a small machine would be far less productive. They have large tanks, wide scrub path and are traditionally battery powered, but cord electric machines are available as well. Battery units can cover expansive areas without the need for an electric outlet. Windsor products include;

Windsor Walk Behind Extractors		
Product	*Stock #*	*Advantages*
Commodore 20	1.008-605.0	• Efficient operation in large areas • Traction driven
Commodore DUO Basic	9.840-421.0	• Can perform either standard deep extraction or encapsulation cleaning • Dual counter rotating brushes • Simple operation dial
Commodore DUO Deluxe	9.840-429.0	• Onboard solution tanks dispense chemical for inline mixing allowing the user to switch between chemicals without dumping, rinsing, and re-filling • Dual counter rotating brushes • Simple operation dial
Voyager DUO Basic	9.840-438.0	• Can perform either standard deep extraction or encapsulation cleaning • Dual counter rotating brushes • Simple operation dial
Voyager DUO Deluxe	9.840-445.0	• Onboard solution tanks dispense chemical for inline mixing allowing the user to switch between chemicals without dumping, rinsing, and re-filling • Dual counter rotating brushes • Simple operation dial

Truck Mount Units

Professional carpet cleaners utilize truck mount extractors in order to maximize portability, heat, high pressure, large recovery and high productivity. These units allow professionals to travel from job to job quickly with minimal set up and tear down time. Building Service Contractors also purchase these units for their mobile floor crews. These machines are internal combustion powered for unlimited runtime with ultra high performance. Truck mount extractors are generally installed in vans designated specifically for this purpose or in some cases an enclosed trailer. The high psi incorporated with tremendous water recovery and heated water clean very effectively. The Windsor brand does not offer truck mount units, however the Prochem & C400 brands do.

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Chariot iExtract

The Chariot iExtact has become the preferred the riding extractor in the industry today. The Chariot can clean areas of carpet that normally have to be cleaned using a wand due to its' small footprint and tight turning radius. The Chariot allows operators the ability to deep extract for restorative cleaning, fast-tract for light cleaning and interim clean by changing jets and applying encapsulation chemical. Dual vac shoes and dual vac motors ensure high recovery and faster dry times. Production rates from 9000-12,000 sq ft per hour, the iExtract cleans more than 1/3 more carpet per hour than traditional walk behind battery extractors.

Windsor Stand-On Extractor		
Product	*Stock #*	*Advantages*
Chariot iExtract	Varies	• Designed with Windsor's Chariot Patented Stand-On Cleaning Technology* that significantly increases productivity and cleaning quality. • Reduces operator fatigue and increases productivity versus the traditional walk-behind extractors. • Provides greater floor coverage than ride-on or walk-behind extractors due to its compact size and maneuverability. • Easy to replace battery pack option enables the Chariot iExtract to run for longer periods; especially in larger facilities that need additional run time. • Large 25 gallon solution capacity extends run time between fill ups

Floor Machines

Floor machines are the workhorses of the cleaning industry. Standard speed floor machines were the very first commercial cleaning equipment ever manufactured. The simplicity of floor machines (they are often referred to as a motor on a stick) and their versatility allow them to clean everything from hard floors to tile to carpet. These machines are simply a motor spinning a pad or brush.

Standard Speed

These cord electric machines rotate at approximately 175 revolutions per minute (rpm) and are used for carpet pre-spray agitation, as well as sanding, stripping, scrubbing and polishing virtually all types of hard flooring. Ranging in size from 13" to 20" in diameter, these machines have rear wheels for transport that are lifted when the machine is put to work. Operating floor machines can be one of the most difficult tasks a new cleaner has to learn. They employ tremendous torque when started and can be difficult to control for

beginners. Brushes and/or pads are attached directly to the bottom of the machine. Typically a red pad is used for daily scrubbing and a black pad is used for stripping. Windsor products include:

Windsor Low Speed Machines		
Product	*Stock #*	*Advantages*
Storm 13“ Storm 17” Deluxe Storm 20” Deluxe	1.009-022.0 1.009-028.0 1.009-032.0	• All metal construction • Dual Capacitors • Conveniently placed handle release

Dual Speed

These floor machines are similar to the above units, but their higher speeds — up to 300 rpm — make them better suited for spray buffing and stripping. Since these units are dual-speed, the user can switch between the higher (300 rpm) and lower rpm for scrubbing or stripping and faster rpm for polishing. Windsor products include:

Windsor Dual Speed Machines		
Product	*Stock #*	*Advantages*
Storm Dual Speed	1.009-035.0	• All metal construction • DC Rectified motor provides more stable amp draw • Conveniently placed handle release

Ultra High Speed Burnishers

These machines range in size from 17” to 20” and rotate at 1000 to more than 2,500 rpm. Ultra high speed burnishers are used to increase shine and repair scratched floors on today’s floor finishes. High speed machines employ the use of specially coated pads that when spinning, “cut” the finish to create a smooth (shiny) surface. This dry process is called “burnishing”. Because of this higher speed and friction, they are able to produce the “wet look” many facility managers prefer. High speed burnishers are available in cord electric, battery or propane models. Some burnishers have built in dust control systems that are able to contain the powder or dusting created by the high rpm’s of the machine. Windsor products include;

Windsor Ultra High Speed Burnishers		
Product	*Stock #*	*Advantages*
Lightning 1500	1.009-016.0	• Top mounted handle lock
Lightning 2000	1.009-019.0	• Top mounted handle lock • Passive dust control system
Lightning 20	9.840-061.0	• Passive dust control system
Lightning 20 Traction	9.840-063.0	• Passive dust control system • Traction drive

Chariot iGloss

The Chariot iGloss is a perfect replacement for walk-behind battery burnishers. Operating at speeds up to double the average walking pace the Chariot iGloss is twice as productive as comparative walk-behind machines. Equipped with passive dust control to minimize particulates, the iGloss protects indoor air quality that most burnishers ignore. The Chariot iGloss also contains a large storage area where operators can carry additional floor pads. Equipped with the Quick Change Productivity Battery Pack system the iGloss can run up to 6+ hours and burnish over 120,000 sq ft of floor.

Windsor Stand-On Burnisher		
Product	*Stock #*	*Advantages*
Chariot iGloss 20”	9.840-046.0	• Soft start reduces instances of “donuts” • Specially designed motor maintains an actual and constant 2000 rpms on the floor for a superior shine

Auto-Scrubbers

An auto-scrubber is a specially designed machine that applies solution, scrubs the floor and recovers the solution in one pass. When auto-scrubbers are used by properly trained operators these machines can dramatically cut labor time and increase productivity. Auto-scrubbers are most commonly battery powered, with cleaning widths ranging from 17” up to 34” in the commercial market. Auto-scrubbers over 36” are usually considered industrial machines. Recently, the industry has seen an influx of “mini” auto scrubbers enter the market. These units are often cord electric machines ranging in size from 12” up to 17”. Productivity can be increased by up to 50% when using a battery machine vs. a corded machine. Scrubbing is accomplished by pads (most effective on flat surfaces) or brushes (most effective on uneven surfaces) which can be rotary or cylindrical.

Mini Auto Scrubbers

Mini auto-scrubbers produce the same quality cleaning results as larger versions but can clean much smaller and confined areas. Areas of less than 5000 sq/ft are good choices for these machines. These units are excellent replacements for applications that would have been historically cleaned with a mop and bucket. These units range in size from 12” to 16” and are usually cord electric operated. Mini auto-scrubbers are simple to operate and can be utilized by operators with little training. Windsor products include;

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Windsor Mini Auto Scrubbers		
Product	*Stock #*	*Advantages*
Saber Blade 12	1.783-206.0	• Simple operation • Cleans small congested areas quickly • Low dBa
Saber Blade 16	9.840-710.0	• Dual cylindrical brush scrubber • Up to 80lbs down pressure • Multiple cleaning application when combined with various brushes • Recovery & solution tank remove from machine for complete cleaning

Compact Auto-Scrubbers

Compact auto-scrubbers range in size from 16” to 22”. Capacities are generally 6 to 12 gallons of cleaning solution with recovery tanks holding an equal amount. These machines are ideal for smaller facilities or for highly congested applications. These machines are small enough that they can easily be transported from one facility to another on a frequent basis. Facilities with 5000 to 25,000 sq/ft are best fits for these machines. Windsor products include:

Windsor Mini Auto Scrubbers		
Product	*Stock #*	*Advantages*
Saber Compact 16 SP	9.840-531.0	• Cylindrical scrubber • Intuitive controls on one dial • Recovery tank opens up for complete cleaning
Saber Compact 17	9.840-327.0	• On-board charger standard • Easy pad release and replacement
Saber Compact 20	9.840-140.0	• Vacuum mounted above the recovery tank to reduce incidents of water being pulled through the motor
Saber Compact 20 Traction	SC20TD3	• Vacuum mounted above the recovery tank to reduce incidents of water being pulled through the motor • Traction drive
Saber Compact 20 Deluxe	SCX20TD3	• Vacuum mounted above the recovery tank to reduce incidents of water being pulled through the motor • Traction drive • Deluxe squeegee with adjustments

Walk Behind Auto-Scrubbers

These units range in size from 24” to 36” in scrub path. Larger solution/recovery tanks allow the operator to be productive by extending the time between dumping and refilling the machine. Walk-behind auto-scrubbers in this size range are designed for larger facilities with square footage of 30,000-60,000. Machines in this category are battery powered and available in either 24V or 36V configurations. Larger auto-scrubbers can be difficult to operate and require an aggressive training program to ensure

operator and building safety. Machines in this category should be operated by a professional cleaner. Windsor products include:

Windsor Walk Behind Scrubbers		
Product	*Stock #*	*Advantages*
Saber Cutter 26 Mechanical Deck	SC264D3	• Aqua-mizer system saves water and chemical while increasing productivity • Excellent sightlines for increased safety
Saber Cutter 26 Actuated Deck	SCX264D3	• Aqua-mizer system saves water and chemical while increasing productivity • Excellent sightlines for increased safety • Actuated Deck
Saber Cutter 32 Actuated Deck, 24V	SCX324D3	• Aqua-mizer system saves water and chemical while increasing productivity • Excellent sightlines for increased safety • Actuated Deck
Saber Cutter 32 Mechanical Deck, 36V	SC326D3	• Aqua-mizer system saves water and chemical while increasing productivity • Excellent sightlines for increased safety
Saber Cutter 32 Actuated Deck, 36V	SCX326D3	• Aqua-mizer system saves water and chemical while increasing productivity • Excellent sightlines for increased safety • Actuated Deck
Saber Cutter Squeeze Play	SCX364D3	• Excellent sightlines for increased safety • Deck expands from 28” to 36” for increased productivity

Rider Auto-Scrubbers

These scrubbers are utilized in a wide variety of applications. Rider scrubbers are available in sizes from 26”-36” In the past, rider scrubbers were used mainly in industrial applications, however, this has changed in recent years, as riders have gradually decreased in size. The machines are now also being utilized in commercial applications. One of the changes in the product design is the capability of driving the rider through a standard 36” doorway, thus gaining access to multiple rooms in the facility. Benefits of riding are increased productivity, less operator fatigue, and employee morale. Operators also experience improved visibility and better turning radius. Rider scrubbers require intense training both on operation and maintenance issues. Applications for rider scrubbers include large education facilities, arenas, convention centers, large healthcare facilities or any facility with over 60,000 sq/ft of hard surface. Windsor products include:

Windsor Rider Scrubbers		
Product	*Stock #*	*Advantages*
Saber Glide 28	9.840-245.0	• One touch button starts and stops all cleaning functions for simple operation • Open operator area for maximum visibility and safety
Saber Glide 32	9.840-255.0	• One touch button starts and stops all cleaning functions for simple operation

		• Open operator area for maximum visibility and safety
Saber Glide Squeeze Play	9.840-264.0	• One touch button starts and stops all cleaning

Chariot iScrub The industry's first stand-on platform of floor care equipment, the Chariot significantly increases productivity and cleaning quality by reducing operator fatigue. Chariots are easy to use and operators have superior full-circle visibility of obstacles. The Chariot's small footprint and ultra-tight turning radius make it ideal for cleaning in busy, complex building layouts without disrupting workflow. Windsor's Chariot iScrub models include:

Windsor Stand-On Scrubbers		
Product	*Stock #*	*Advantages*
Chariot iScrub 20	9.840-810.0	• 20" cleaning path • 10 gallon solution and recovery tank • 50% more productive than a conventional 20" walk-behind scrubber • Unparalleled visibility in congested areas and small spaces
Chariot iScrub 20 Deluxe	9.840-898.0	• Outside fill port • On-board charger for AGM models • Easy access to batteries
Chariot iScrub 24"	9.840-691.0	• Aqua-mizer system saves water and chemical while increasing productivity • Excellent sightlines for increased safety • Squeegee swings out 14" on either side to recover water, even in tight turns
Chariot iScrub 26" Cylindrical	9.840-705.0	• Dual counter rotating brushes • Wet pre-sweep capability

Sweepers

Sweepers are an important component of a solid flooring program. The primary function of a sweeper is to capture soil before it enters a facility. Once soil enters a facility the damage to flooring surfaces is a snowball effect. Sweepers can be either direct throw or overthrow. Direct throw sweepers utilize a main broom to sweep soils into a hopper much like a broom would sweep soil into a dust pan. Overthrow sweepers utilize a main broom that is designed to pick up debris, usually large debris, and carry it up and over the broom to dump it into a top fill container. Generally, direct throw sweepers work well on small soils and sand while overthrow sweepers work well on larger debris like paper and cigarette butts.

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Manual Sweepers

These machines do the job that three or four individuals do with brooms. This category of equipment is classified as a manual push sweeper. The brushes in the unit are powered by pulleys off the back wheels. The main broom throws the debris into a hopper that is relatively small. These sweepers have no real dust control systems. No drive motors or vacuum motors. This keeps the machine light on price and weight. The machine works best on rough surfaces like concrete or carpet. The sweeping path ranges from 26’” to 32”. Windsor products include:

Windsor Manual Sweepers		
Product	*Stock #*	*Advantages*
Radius Mini	1.545-113.0	• Designed for commercial use • Battery powered • Cleans within 1/8 of an inch from the wall
Radius Manual Sweeper	1.517-104.0	• Easy main and side broom adjustments • Main broom is driven by metal gears on both wheels and operates whether the unit is turning right or left • Side broom fold up for cleaning in dusty environments

Walk Behind Sweepers

These units range in sweeping path size from 24” to 36”. These units are available most commonly with battery power, however some manufacturers offer gas powered machine. Sweepers utilize a hopper for soil and debris collection, as the machines increase in size the hopper capacity increases as well. Some of the machines have drive motors to propel them. Applications for these units include entrance cleaning and lighter duty outdoor areas. Warehouses and light manufacturing are also excellent applications. These units are now being used for both indoor hard and soft floors. Windsor products include:

Windsor Walk Behind Sweepers		
Product	*Stock #*	*Advantages*
Radius 280 Deluxe	1.517-206.0	• Battery powered • Vacuum fan provides active dust control • Easy main and side broom adjustments • Side broom fold up for cleaning in dusty environments
Radius 300	9.840-665.0	• 30" sweeping path with side broom • Chain driven • On-board charger • Self-propelled with 400 watt drive motor • 1.5 ft3 (40 liter) hopper capacity

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Rider Sweepers

These machines range in size from 36” to 66”. They are battery or internal combustion engine powered. The larger sized units are most seen in warehouse or factory applications. Smaller sized riders are being used in large carpeted areas. Best applications for the smaller riders are entrance cleaning, small parking garages, drive up areas and warehouses. Windsor products include:

Windsor Rider Sweepers		
Product	*Stock #*	*Advantages*
Radius 360	9.840-665.0	• 36" sweeping path • Overthrow sweeping • 2 hoppers for ease of dumping

Interim Cleaning Machines

The iCapsol system is used in conjunction with our iCapsol Carpet Chemical which is based on encapsulation technology. The iCapsol solution is mixed at 8 ounces per gallon and misted lightly over the area to be cleaned. It is then agitated into the carpet pile with the iCapsol machine. The solution comes in contact with the soils that are stuck to the carpet fibers, pulls them from the fibers and holds them in solution. Once the soils are held in solution the iCapsol Chemical dries to a light, non-sticky crystal that is vacuumed out of the carpet at the next scheduled vacuuming.

The entire process, from spraying the iCapsol chemical, to working it in, until it is dry enough to vacuum, generally takes about 20 minutes. This process is a great replacement for bonnet cleaning, which can leave heavy residues in the carpet and cause damage to the carpet backing. Encapsulation extends the period of time between restorative extraction processes. Windsor products include:

Windsor iCapsol Encapsulation Machines		
Product	*Stock #*	*Advantages*
iCapsol Mini	9.840-302.0	• Dual counter rotating brushes which are removable with no tools • Debris hopper
iCapsol Mini Deluxe	9.840-304.0	• Onboard 2 gallon solution tank and spray jet • Dual counter rotating brushes which are removable with no tools • Debris hopper

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Specialty Cleaning Machines

Specialty cleaning machines are machines that allow our customers to increase productivity and save money by performing tasks faster or with less labor. In any facility cleaners can be faced with cleaning tasks that traditional machines were not designed to handle. Specialty machines are products created to address very specific cleaning tasks. These range from restroom cleaning machines to steam machines to escalator cleaners.

Multi-Surface Cleaning Machines

Multi-Surface Cleaning Machines are primarily used for restroom cleaning but can also be used for carpet extraction, kitchen cleaning or general pressure washing. On-board chemical dilution with dirty water recovery is the unique features of this style of machine. With the flexibility to clean multi surfaces by adding specific tools, this machine can be an excellent tool for any facility. The main competitors in this category are Kaivac, Advance, and Tennant/Nobles. Windsor's products include:

Windsor All Surface Cleaning Machines		
Product	*Stock #*	*Advantages*
Compass 2	1.007-056.0	• Onboard dilution control • Chemicals sit in a protected area, not on top of the machine

Escalator Cleaners

The Treadway Escalator Cleaner provides a wet cleaning solution for a wide variety of escalators and moving walkways. It is only wet cleaning machine in the industry with a price tag of less than $20K. This machine is an excellent solution for facilities that have multiple escalators. Escalators can be cleaned quickly with short shut-down times using this machine. Windsor's products include:

Windsor Treadway Escalator Cleaner		
Product	*Stock #*	*Advantages*
Treadway for Otis, Thyssen-Krupp, Fujitel, Montgomery	9.840-525.0	• Wet cleaning with vacuum pick-up • Typical escalator is cleaned in under an hour
Treadway for Schindler, Westinghouse, Mitsubishi	9.840-527.0	
Treadway for Kone, O&K	9.840-526.0	
Treadway for CNIM, Dong Yang, Hitachi, Toshiba	9.840-528.0	

Equipment Basics Course

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Steam Cleaners

Steam Cleaners allow the user to clean without chemicals by harnessing the power of steam. Steam is generated in a boiler, applied to the surface with various tools where the soil can be easily wiped away. At 212 degrees steam is also considered an excellent way to sanitize surfaces. Steamers can aid in eliminating beg bugs in a facility and removing annoying odors from upholstery. Steamers are also a vital tool in kitchen areas to sanitize food prep surfaces without chemicals and clean cooking equipment. Windsor's product includes:

Windsor Zephyr Steam Cleaner		
Product	*Stock #*	*Advantages*
Zephyr	1.092-803.0	• Two tank system, boiler and refill tank • 1.2 gallon capacity • Continuous refill capability